

Application No. 10/701,855  
Amendment dated February 23, 2005  
Reply to Office Action dated November 23, 2004

## REMARKS/ARGUMENTS

In response to the Election/Restriction Requirement contained in the Office Action mailed November 23, 2004, Applicants elect to prosecute claims 1 and 29-48, which the office action characterizes as Invention I (“Claims 1, and 29-48, drawn to an etching method, classified in class 216, subclass 100”). Claims 57-61 have been added by this amendment. Claims 1 and 49-56 are cancelled by the present amendment. Claims 29-48 and 57-60 remain in the application for further prosecution. Claim 40 has been amended to correct a grammatical error.

### Information Disclosure Statement

The Examiner has indicated that the information disclosure statements filed on November 5, 2003 and February 17, 2004 fail to comply with 37 CFR § 1.98(a)(2) as a copy of each foreign patent and each publication was not submitted. Copies of each foreign patent and most of the publications are being submitted herewith for the Examiner’s convenience. Applicant was unable to locate references C19 and C91 on the Form PTO-1449 previously submitted. Applicant respectfully notes that all of the references being submitted were previously cited in one of the earlier applications relied on for an earlier effective filing date under 35 U.S.C. §120, particularly U.S. Patent Application No. 09/259,432.

### Rejections Under 35 U.S.C. § 112

Claims 1 and 29-48 were rejected under 35 U.S.C. § 112 as being indefinite. The Examiner objected to the phrase “substantially uniform” used in the claims. Reconsideration is respectfully requested.

The phrase “substantially uniform” is used in claims 1, 29, 34, 35, 39 and 40 to describe the roughened surface produced by the method of the invention. From the photomicrographs of these

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surfaces, it is clear that a precise description of such surfaces is not possible. One can see that the irregularities creating the peaks and valleys are not identical.

Preferably, the surface is as uniform as possible, which is the reason why removal of the native oxide is done before acid etching. As described in Example 2, the native oxide will interfere with the acid etching process. Therefore, the Applicant submits that use of the phrase "substantially uniform surface roughness" and the phrase "substantially uniform array of irregularities" is appropriate to describe the implant surface and should be retained. In fact, the Patent Office has already issued several patent to the assignee having this or similar language. See claims 3 and 5 of U.S. Patent No. 5,876,453; claims 1 and 14 of U.S. Patent No. 6,491,723; and claims 1 and 13 of U.S. Patent No. 6,652,765. All of these patents are related under 35 U.S.C. § 120 to the present application. Considering that the Applicant is attempting to describe this surface as best as possible without being unduly limiting, and that the Examiner is also trying to ensure that the claims are properly worded to cover this surface, the Applicant is open to other language that the Examiner may propose to ensure that a surface having these irregularities is covered by the claims.

Applicants further note that in pending Application No. 09/327,605, the Examiner has withdrawn a §112 rejection after recognizing that the related patents mentioned above contain the same "substantially" language.

#### **Rejections Under 35 U.S.C. § 102(b)**

Claim 1 was rejected under 35 U.S.C. § 102(b) as being unpatentable over Haruyuki. Claim 1 has been cancelled to expedite the allowance of the present case. However, Applicant respectfully notes that the translation of Haruyuki, provided by the Examiner during the prosecution of parent U.S. Application No. 09/777,335, teaches a method of treating the surface of a titanium implant with

a solution of hydrofluoric acid, which is then followed by post-treatment with a solution of hydrofluoric acid and hydrogen peroxide. The initial treatment with a solution of 1-6 wt % HF for 30 seconds to 3 minutes is said to create pits which have sharp edges. Then, post-treatment is performed to smooth the sharp edges, which can cause tissue irritation (Translation, page 4, left column). Thus, Haruyuki does not teach a second treatment that roughens the surface from which the native oxide was removed. To the contrary, Haruyuki teaches smoothening the sharp edges produced by the first treatment. Again, Haruyuki's second step was intended to smoothen the sharp edges created by his first treatment with hydrofluoric acid, rather than to further roughen the surface.

### **Double Patenting Rejections**

Claims 1, 29-48 were rejected under the judicially created doctrine of obviousness-type double patenting with regard to claims 1-42 of U.S. Patent No. 6,491,723 and claims 1-15 of U.S. Patent No. 5,603,338. Claim 1 was rejected for obviousness-type double patenting over claim 5 of U.S. Patent No. 5,876,453 and over claims 1-42 of U.S. Patent No. 6,652,765.

As claim 1 has been canceled, to overcome these rejections, Terminal Disclaimers are submitted herewith for U.S. Patent Nos. 6,491,723 and 5,603,338. These Terminal Disclaimers should not be construed as an admission to the merits of the obviousness-type double-patenting rejections pursuant to Quad Environmental Technologies Corp. v. Union Sanitary District, 946 F.2d 870 (Fed. Cir. 1991).

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**Conclusion**

It is the Applicant's belief that all of the claims are now in condition for allowance and action towards that effect is respectfully requested.

If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at the number indicated.

Respectfully submitted,

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